Treatment of Anger and Aggression for Offenders with Intellectual Disabilities in Secure Settings

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Introduction

Survey research across several continents has found high rates of aggression amongst people with intellectual disabilities – with rates of aggression commonly found to be much higher for those living in secure forensic and institutional facilities than for those residing in community settings (see Table 1).

The impact of aggression is significant in a number of ways for people with intellectual disabilities and those who provide support and services to them. Aggression was found to be the primary reason for people with intellectual disabilities to be admitted or re-admitted to institutional settings (Lakin, Hill, Hauber, Bruininks & Heal, 1983). Aggression has also been shown to be the main reason for individuals in this client group to be prescribed antipsychotic and behavioural control drugs (Aman, Richmond, Stewart, Bell & Kissell, 1987), despite there being little or no evidence for their efficacy (e.g. Brylweski & Duggan, 1999; Tyrer et al, 2008).

Aggression carries high costs for individuals with intellectual disabilities who are physically violent in terms of prolonged periods of detention and exposure to ineffective treatments with potentially serious side-effects, for their direct carers who experience physical injury and consequent absence from work, and for services supporting them that are exposed to increased costs through sick-leave payments, worker compensation and high staff turnover (Singh et al., 2008; Taylor, Novaco, Gillmer, Robertson & Thorne, 2005).

While it is neither necessary nor sufficient for aggression to occur, anger has been shown to be strongly associated with and predictive of violence in men with intellectual disabilities and offending histories (Novaco & Taylor, 2004). Thus anger has become a legitimate therapeutic target for people with intellectual disabilities who are aggressive and violent.

Treatment of Anger and Aggression in People with Intellectual Disabilities

Psychopharmacological Treatments

The use of psychotropic medications with people with intellectual disabilities and various behavioural and psychological difficulties, including aggression, has been reviewed by Baumeister, Sevin and King (1998), Matson et al. (2000), and Brylewski and Duggan (1999). The results of these reviews suggest that: (a) they lack specificity with regard to target behaviours and are likely to exert non-specific effects by suppressing behaviour or cognition generally; (b) there is no sound evidence that medications are effective in treating aggression in people with intellectual disabilities; and (c) that their continued use without trial-based evidence is ethically questionable.

Behavioural Interventions

In their review of 'decelerative' interventions for behaviour problems in people with intellectual disabilities, Lennox, Miltenberger, Spengler and Erfanian (1988) found that for subjects with aggression problems more intrusive interventions (e.g. aversion techniques and medication) were more likely to be used although less intrusive and more constructive treatment approaches, such as environmental change and contingency management, performed slightly better.

Scotti, Evans, Meyer and Walker (1991) carried out a meta-analysis of interventions for problem behaviour in people with intellectual disabilities. Compared with other classes of behaviour problems, physical aggression/tantrum behaviours were associated with significantly lower treatment effects. Overall less intrusive interventions, including environmental change and positive practice, were generally more effective than the most intrusive techniques such as aversive stimulation and restraint.

Carr et al. (2000) reviewed non-contingent reinforcement (NCR) as a treatment for ‘aberrant’ behaviour in people with intellectual disabilities. They concluded that whilst NCR is a promising approach for the treatment of problem behaviour, including aggression, it has not yet been evaluated outside of extremely well controlled experimental settings. Transferability and generalisation effects have yet to be explored and the schedule thinning in the studies reported thus far would not be practical in routine clinical or naturalistic settings.

Whitaker (1993) reviewed psychological methods for reducing aggression in people with intellectual disabilities. He found little evidence for the effectiveness of self-control procedures including self-monitoring, contingency control and self-instruction. This was the case particularly with people with greater levels of disability and associated cognitive and language deficits. Whilst he found some limited evidence for the usefulness of ecological interventions in reducing aggression in subjects with severe and profound levels of intellectual disability, the number of studies reporting this approach was small. The bulk of the literature incorporated into Whitaker’s (1993) review is concerned with contingency management using behavioural methods with participants with low levels of intellectual functioning. Whitaker concluded that for this population, the most effective psychological approaches to the reduction of aggression in people with intellectual disabilities are behavioural in nature, involving antecedent control, skills training, or contingency management. There are, however, significant problems in successfully implementing these approaches with low-frequency aggression and in settings without high staff-client ratios.

Cognitive Behavioural Interventions

One potential advantage of cognitive behavioural treatment is that self-actualisation through the promotion of portable and internalised control of behaviour is intrinsic to the skills training components of these approaches. Further, there is evidence from studies in non-disability fields that for a range of psychological problems the effects of cognitive-behavioural treatments are maintained and increase over time compared to control conditions (Taylor & Novaco, 2005).

Willner (2007) reviewed nine controlled studies involving people with intellectual disabilities that compared cognitive behavioural treatment for anger control problems with wait-list control conditions. All of these studies reported significant improvements on outcome measures for those in treatment conditions that were maintained at 3 to 12-month follow-up. In a linked series of studies comparing cognitive behavioural anger treatment versus treatment-as-usual for men with mild-borderline intellectual disabilities and offending histories living in secure hospital settings, Taylor and colleagues demonstrated significant reductions on measures of anger disposition, reactivity and imaginal provocation (Taylor et al., 2005; Taylor, Novaco, Gillmer & Thorne, 2002; Taylor, Novaco, Guinan & Street, 2004).

Taylor et al. (2002) reported a pilot study involving 20 detained male patients with mild-borderline intellectual disabilities and violent, sexual and fire-setting offending histories, 50% of whom had carried out physical assaults following their admission to hospital. The treatment protocol for this study was a major re-working of Novaco's (1993) treatment approach for use with people with mild to borderline intellectual disabilities. The treatment comprised 18 sessions of individual cognitive-behavioural anger treatment from qualified and chartered psychologists: six sessions of a preparatory and motivational nature; followed by 12 sessions of treatment proper based an individual formulation of each participants anger problems and needs, and

following the classical cognitive-behavioural stages of cognitive preparation, skills acquisition, skills rehearsal and then practice *in vivo*. Patients' self-report of anger intensity to provocation was significantly lower following intervention in the treatment condition compared to the waiting-list condition. Some limited evidence for the effectiveness of treatment was provided by staffs' ratings of patients' anger disposition and coping behaviour post-treatment.

As part of a study aimed mainly at developing an idiographic and clinically meaningful imaginal provocation measure of clients' response to anger treatment, Taylor et al. (2004) conducted a small controlled study using the same intervention and study procedures described above with reference to Taylor et al. (2002). In order to test whether this newly developed test for people with intellectual disabilities was sensitive to change associated with anger treatment the imaginal provocation test scores of 9 detained offenders allocated to a treatment condition were compared to those of a matched group of 8 participants allocated to wait-list condition. Between groups analyses showed that following intervention the treatment group's scores were significantly improved compared with those of the control group on the imaginal provocation test indices. After the wait-list control group had received anger treatment they were re-assessed and their pre-post treatment scores improved significantly on the imaginal provocation test indices.

In an extension of the Taylor et al. (2002) and Taylor et al. (2004) studies, Taylor et al. (2005) reported on a larger study with 40 men with mild-borderline intellectual disabilities and histories of offending. All participants were detained in a specialist forensic intellectual disability service. Just seven of the 40 had no prior convictions, although they all had well documented histories of anti-social and offending behaviours. The study design and procedures were essentially the same as

those for the earlier studies, and the intervention was guided by the same treatment protocol. Twenty patients were allocated to a treatment condition and 20 to a routine care wait-list control condition. Scores on self-reported anger disposition and reactivity indices were significantly reduced following intervention in the treatment group compared with scores for the control group, and these differences were maintained at four-month follow-up. Staff ratings of study participants' anger disposition converged with patient self-reports but did not reach statistical significance.

Impact of Cognitive Behavioural Anger Treatment on Aggressive Behaviour and Violence

Although a number of small controlled studies have demonstrated the effectiveness of cognitive behavioural interventions for anger control problems as indexed by self- and informant reports, the impact of these approaches on aggressive behaviour, including physical violence has been investigated empirically on only a few occasions.

Rose (1996) reported some reduction of aggression in 5 men with anger problems living in community settings following involvement in a group cognitive behavioural intervention. Allan, Lindsay, MacLeod and Smith (2001) and Lindsay, Allan, MacLeod, Smart and Smith (2003) reported reductions in violence following a group intervention in case series of 6 women and 6 men respectively with violence convictions living in the community. In a larger study involving 47 people with intellectual disabilities and histories of aggression, Lindsay et al. (2004) showed that following a community group anger intervention 14% of participants had been aggressive during follow-up, compared with 45% of people in a control condition. In the first study of this kind conducted in a secure setting, Singh et al. (2008) showed

significant reductions of physical aggression and associated costs following a 'mindfulness-based' cognitive behavioural intervention with 6 male offenders in a forensic mental health facility for people with intellectual disabilities.

Taylor and Novaco (2009) described an evaluation of the impact of the cognitive behavioural anger treatment described earlier (e.g. Taylor et al., 2002) on aggressive and violent behaviour by offenders with intellectual disabilities living in secure forensic hospital settings. Incident data was collected retrospectively from hospital casenotes over a 24-month period. A study pro forma was used to collect data on 6 categories of behaviour, including physical attacks on other patients and members of staff which was operationally defined as "hitting, punching, kicking, lashing out and so on that was aimed at harming peers, staff or others". The data collected was organised into four assessment intervals: Time 1 = 7-12 months pre-treatment; Time 2 = 0-6 months pre-treatment; Time 3 = 0-6 months post-treatment; and Time 4 = 7-12 months post-treatment. The participants in this study were 44 men and 6 women referred by their clinical teams for anger treatment on the basis of their histories of aggression and/or current presentation. The study group had a mean age of 30 years (*SD* = 9.6), mean WAIS-III full scale IQ of 68.6 (*SD* = 6.7), and a median length of stay in hospital at the time of treatment of 2.5 years. All participants were detained in hospital under sections of the England & Wales Mental Health Act. Forty-two patients (84%) had convictions/documented histories of violence; 30 (60%) for sexual aggression; 16 (32%) for fire-setting; and 27 (54%) for other offences.

The study participants improved significantly following treatment on self-report measures of anger disposition, anger reactivity, and anger control; and on an informant-rated measure of anger attributes. More pertinently, the total number of aggressive incidents (including verbal abuse, threats of violence, assaults, and damage

to property) recorded in the casenotes of the 50 participants fell from 966 in the 12-months before treatment (Time 1 = 466; Time 2 = 500) to 693 in the 12-month period post-treatment (Time 3 = 359; Time 4 = 334). This represents a 28.3% reduction following treatment. Figure 1 shows physical attacks against staff and patients over the 24-month study period. It can be seen that 319 physical assaults were recorded in the 12-month pre-treatment period (Time1 = 128; Time 2 = 191) and 153 following treatment (Time 3 = 93; Time 4 = 60) (see). This represents a reduction after treatment of 52%. The reductions in both the mean number of aggressive incidents and physical attacks from Time 1 through Time 4 were statistically significant when an appropriate non-parametric statistical test (Friedman test, χ^2) was applied.

Conclusions

High rates of aggression and violence are found amongst offenders with intellectual disabilities residing in secure services. This has a significant impact on patients' rehabilitation pathways and movement to less secure and supervised settings. There are also high costs associated with these behaviours for direct care staff and the systems and services supporting these clients.

Patients with significant histories of offending who have exhibited recent violence in secure service settings have been shown to be amenable to and to benefit from an adapted, individually-delivered and intensive cognitive behavioural anger treatment programme. Further, there are encouraging indications that improvements on self- and informant-rated measures of anger are associated with significant reductions in inpatient aggression and violence over a 12-month period.

This harm reduction effect, if found to be a robust finding, is likely to result in important benefits for individual patients and care staff, as well as significant cost improvements for services.

Further research using prospective controlled study designs is needed to investigate whether the association between anger treatment effects and reductions in aggressive and violent behaviour is robust across a range of settings and over time. In addition, a careful economic analysis is required to further elucidate the cost-benefits of cognitive behavioural anger treatment for offenders with intellectual disabilities in secure settings.

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Table 1

Studies of Prevalence of Aggression Amongst People with Intellectual Disabilities Across Service Settings

	N	Location	Prevalence (%)		
			Community	Institution	Forensic
Taylor et al. (2009)	782	England	12	-	-
Tyrer et al. (2008)	3065	England	16	-	-
Deb et al. (2001)	101	Wales	23	-	-
Emerson et al. (2001)	2189	England	7	-	-
Hill & Bruininks (1984)	2491	USA	16	37	-
Harris (1993)	1362	England	11	38	-
Sigafoos et al. (1994)	2412	Australia	10	35	-
Smith et al. (1996)	2202	England	-	40	-
Novaco & Taylor (2004)	129	England	-	-	47
MacMillan et al. (2004)	124	England	-	-	47

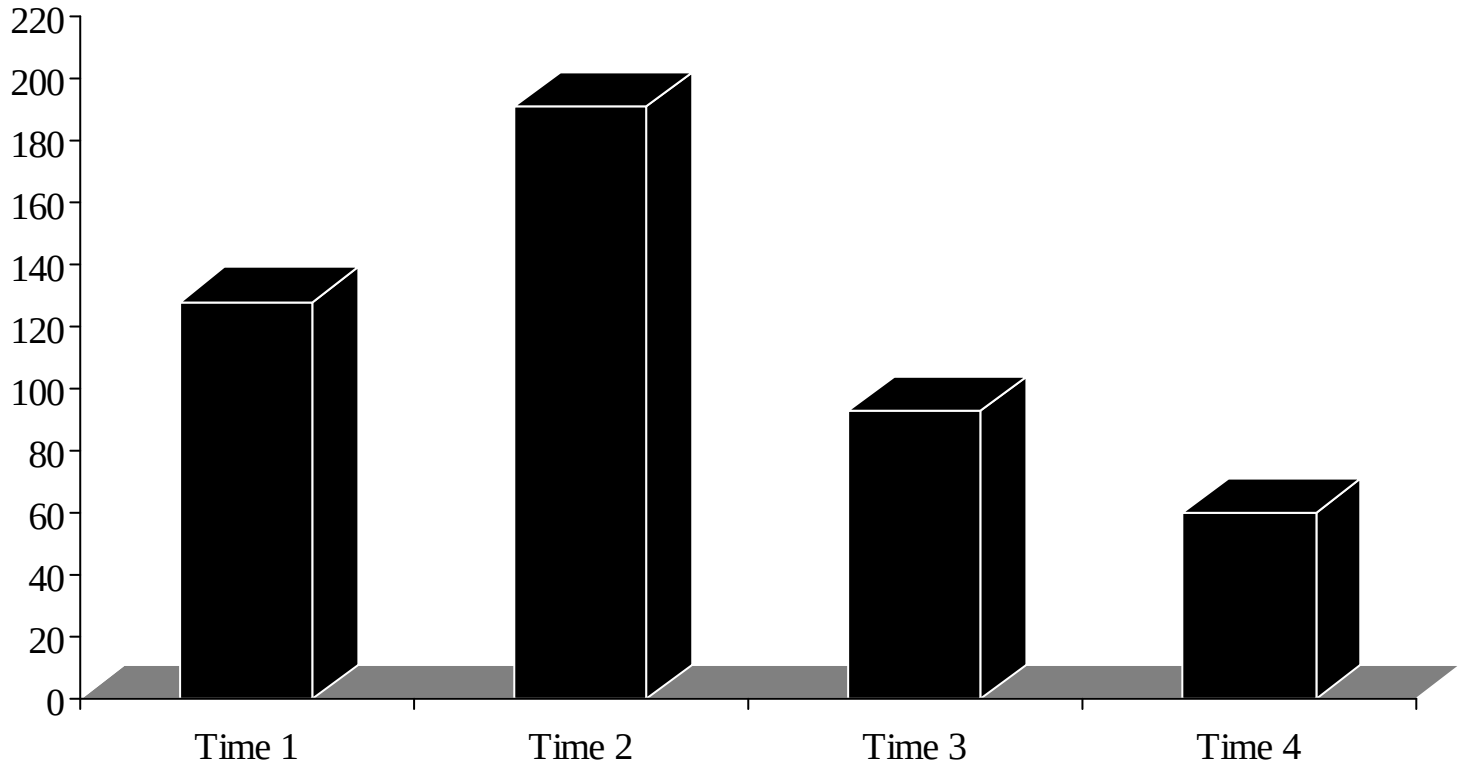

Figure 1. Number of Physical Attacks Over 24 Months: Pre- and Post-Treatment (*N* = 50). Time 1 = 128; Time 2 = 191; Time 3 = 93; Time 4 = 60.